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Visual Case Discussion

Facial nerve palsy: the importance of face mask and shield removal examination under the COVID-19 pandemic

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Visual Case Discussion

A 94-year-old lady was referred to the ophthalmology clinic for eyelid problems. She complained of increased tearing over her right eye for few days without any pain. She was wearing a N95 face mask and a transparent face shield, which had an elastic forehead band and brow foam pad, upon her emergency attendance under the COVID-19 pandemic. Emergency physicians detected significant lagophthalmos over her right eye upon instructed lid closure, (Figure 1) thus referred her to ophthalmologist for further management. Patient's face shield and face mask were not removed for exam under the local Omicron outbreak, thus brow exam and face exam were omitted.

By removing the face shield and face mask, there was obvious loss of right sided forehead wrinkles, and failure to lift the right brow despite instruction. (Figure 2) She had bilateral dermatochalasis, but right lower lid ectropion was still obvious upon comparison with the left side. Going down the face, there was loss of right nasolabial fold, as compared to the left. And her right angle of mouth was drooping despite no drooling. Extraocular movement was full in all direction, without any evidence of other cranial nerve palsy. Patient has no recent trauma or previous surgery, and her hearing is not affected with normal otoscope findings. Palpation did not find any parotid gland swelling, and neuro-imaging was normal. Idiopathic Bell's palsy was diagnosed by exclusion. Oral prednisolone was given upon discharge.

Under the COVID-19 pandemic, face mask, or even face shield, wearing is widely practiced among the public to prevent aerosols and

droplet transmission of the SARS-CoV-2 viruses, especially with the Omicron variant. Hospital, particularly the emergency department, is treated as high risk area as there are potential COVID-19 patients; and full compliance with face mask upon arrival was suggested by authorities. Being an essential personal protective equipment, face mask and shield covered most of our faces to offer the protective effect. However, subtle but important clinical signs of the face may be missed without taking the face mask and shield off for physical examinations. In our case, examining the brow ptosis, loss of nasolabial fold and drooping of mouth angle are essential for diagnosis of facial nerve palsy.¹

Facial nerve palsy can be isolated, or complex with other cranial nerves involvement. In cerebellopontine angle lesion, patients may have combined fifth to eighth nerve palsy. In contrast, dorsal pons facial colliculus pathology can result in ipsilateral sixth and seventh nerve palsy, known as the Millard-Gubler syndrome.² Face mask and shield removals are also essential to differentiate upper motor neuron lesion from lower motor neuron lesion. The upper facial muscles would still function and could raise the eye brow in upper motor neuron lesions due to the anatomy of bilateral innervation.

Treatment with intensive artificial tears during daytime and lubricant ointment use at bedtime are essential to prevent secondary exposure keratitis from lagophthalmos. If lagophthalmos is significant, taping the lid close at night could be a temporary measure. In severe complicated cases, temporary tarsorrhaphy might even be needed by ophthalmologists.³

In short, complete physical examinations are essential to arrive at the

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Figure 1. Patient was instructed to close both eyes. Right eye significant lagophthalmos with poor Bell's reflex was observed. Note also the right lower lid ectropion.



Figure 2. Patient was instructed to lift the eye brows. Right facial nerve palsy was evidence with failure of raising the right eye brow, right lower lid ectropion and loss of right nasolabial fold.

correct diagnosis. Face mask and shield removal from the patient is still important in managing facial nerve palsy cases under the COVID-19 pandemic.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at [doi:10.1016/j.visj.2022.101339](https://doi.org/10.1016/j.visj.2022.101339).

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